Title: Cooling Made Simple: The CryoWave Blueprint by Fernando Gonzalez

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Message from Fernando

My name is Fernando Gonzalez. I created CryoWave as a low-power, off-grid cooling system that anyone can build.
No Freon, no gas, no compressor-just clean, accessible tech for homes, trucks, and the world.

This blueprint is my gift to humanity. You may share it, build from it, improve it-but never restrict it.

Thank you for honoring that.

What is CryoWave?

CryoWave is a low-power cooling system using thermoacoustic principles. It works by generating high-frequency sound waves inside a sealed chamber.
These sound waves create zones of compression and expansion, which move heat from one side to the other.

The cold side can then be used to cool rooms, vehicles, or insulated storage units.

It does not require refrigerant, moving parts, or high power draw. It can run on solar, battery, or vehicle power.

Benefits

- Uses <30 watts per unit

- Gas-free, compressor-free

- Modular and scalable

- Off-grid compatible

- Safe, quiet, and open-source

Basic Parts List

- PVC or polycarbonate tubing (2-4 inch diameter)

- High-frequency speaker or piezo transducer

- Metal mesh or foil stack (aluminum, copper, or steel)

- Thermal plate (cold surface - aluminum or copper)

- Thermal paste or epoxy

- Foam insulation or Mylar wrap

- Optional: 12V fan for air movement

- Optional: small solar panel or DC battery pack

How to Build It (Simplified)

1. Build the Chamber

   - Use a tube 1-2 feet long, sealed on both ends

2. Mount the Speaker

   - Install the high-frequency speaker or piezo on one end

3. Insert the Stack

   - Inside the tube, place layered mesh or foil to act as a thermal stack

4. Add the Cold Plate

   - Attach a metal plate to the cold side for external cooling

5. Insulate the Outside

   - Wrap the tube in foam or foil to contain temperature zones

6. Power It

   - Use a small amplifier or DC signal to drive the speaker at 1-5 kHz

7. Optional Fan

   - Add a small fan to move chilled air into the space

Refrigerator/Freezer Version

To turn CryoWave into a food cooler or freezer:

- Build or repurpose an insulated box (foam cooler or mini-fridge)

- Mount the cold plate inside the box

- Use a small fan inside to circulate air

- For deep freeze, stack two CryoWave units and insulate heavily

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License Terms

This project is open-source under Creative Commons Attribution 4.0 International:

- You may use, share, and modify it freely

- You must give credit to the original inventor: Fernando Gonzalez

- You may not patent or restrict it in any form

Closing Message

Let this be a gift of freedom.

Build it. Share it. Improve it. Cool the world.

-Fernando Gonzalez